

Title (en)  
FILAMENT EXTENSION ATOMIZERS

Title (de)  
FILAMENTVERLÄNGERUNGSZERSTÄUBER

Title (fr)  
ATOMISEURS PAR EXTENSION DE FILAMENT

Publication  
**EP 3124124 A1 20170201 (EN)**

Application  
**EP 16180871 A 20160722**

Priority  
US 201514812505 A 20150729

Abstract (en)  
An atomization device includes a pair of counter-rotating rollers (102, 104), a fluid source configured to coat at least one of the rollers in a feed fluid, and a baffle unit (200). The counter-rotation of the rollers (102, 104) stretches the feed fluid into a fluid filament between the two diverging surfaces of the rollers. The stretched fluid filaments break into a plurality of droplets at a capillary break-up point of the feed fluid. The baffle unit (200) introduces a baffle fluid within the interior of the device and the baffle fluid transports formed droplets of the feed fluid from the atomization device. Excess or misguided atomized fluid droplets are collected by the baffle unit (200) and are recycled back into the device for use in later atomization processes. The variation of atomization device parameters allows for the selection of droplets having desired physical parameters.

IPC 8 full level  
**B05B 17/04** (2006.01); **B01J 13/00** (2006.01); **B05B 1/28** (2006.01); **B05B 7/00** (2006.01)

CPC (source: EP KR US)  
**B01F 23/2131** (2022.01 - US); **B01J 13/0095** (2013.01 - EP US); **B05B 1/24** (2013.01 - KR); **B05B 1/28** (2013.01 - EP US); **B05B 3/02** (2013.01 - EP US); **B05B 3/08** (2013.01 - US); **B05B 3/082** (2013.01 - EP US); **B05B 7/0075** (2013.01 - EP US); **B05B 12/087** (2013.01 - KR); **B05B 17/04** (2013.01 - EP US); **B05D 1/02** (2013.01 - KR); **B05D 3/02** (2013.01 - KR); **B05B 3/001** (2013.01 - EP US)

Citation (search report)  
• [A] EP 2868390 A1 20150506 - PALO ALTO RES CT INC [US]  
• [A] DE 102012207148 A1 20131031 - ELTEX ELEKTROSTATIK GMBH [DE]  
• [A] US 4034670 A 19770712 - ZAVODNY EUGENE N  
• [A] GB 1261038 A 19720119 - WADDLETON NORMAN [GB]

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CN109261426A

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
**EP 3124124 A1 20170201**; **EP 3124124 B1 20180321**; JP 2017029977 A 20170209; JP 6663812 B2 20200313; KR 102402131 B1 20220527; KR 20170015151 A 20170208; TW 201703867 A 20170201; TW I702089 B 20200821; US 2017028414 A1 20170202; US 9707577 B2 20170718

DOCDB simple family (application)  
**EP 16180871 A 20160722**; JP 2016138323 A 20160713; KR 20160089118 A 20160714; TW 105121827 A 20160711; US 201514812505 A 20150729